REMARKS

Claim 1 is revised to incorporate the substance of Claim 3, which is now cancelled without prejudice. Claims 8, 12, 14, and 32, previously indicated as allowable in substance, are each rewritten in independent form. Claims 9, 19-23, 25, 29, 31, 35, and 36 are revised to address formal objections or rejections, and Claim 32 is also revised for the same reason. Claims 1, 2, and 4-36 remain, with Claims 8-10, 12, 14-15, 32, and 33 previously indicated as allowable in substance.

The undersigned acknowledges the thorough examination of this application as expressed in the Office action. In response to that examination, the specification, abstract, and claims are revised in an effort to comply with each of objection and to address the claim rejections under the second paragraph of 35 U.S.C. § 112. Some of those objections are discussed below, although the undersigned believes that most revisions are responsive on their face to the respective objections and formal rejections.

Information Disclosure Statement

A new Supplemental IDS is submitted concurrent with this response, citing the two U.S. patents identified on page 2 of the specification.

A copy of GB 896,485, cited in the IDS filed 5/27/05, is submitted herewith. A copy of the PTO-1449 included with that IDS is also submitted, and the Examiner is requested to note on that copy that GB'485 has been considered.

Turning to the IDS filed 8/26/05, that IDS identified U.S. patents or published U.S. Applications corresponding to certain ones of the non-U.S. documents identified in the IDS. Namely, US-6,273,142 is part of the patent family for WO99/19654. WO03/004921, which includes an English abstract, is part of the patent family for

FR-2827032 and thus provides an English abstract for that French document (FR-2827032 was cited by the Danish Patent and Trademark Office in its search report of the Danish application on which the present application is based. The DKPTO identified that document as Category A, namely, a document defining a general state of the art which is not considered to be of particular relevance).

FR-1054274 was cited in the International Search Report of WO02/39003 and for that reason was cited by the present Applicant. An English abstract of FR'274 is not available to the undersigned.

The foregoing English abstracts or parallel U.S. patents/patent publications are submitted as complying with the requirement for a concise explanation of relevance as set forth by 37 C.F.R. § 1.98(a)(3). Accordingly, the undersigned respectfully requests the Examiner to consider those documents and confirm consideration to the Applicant, except for FR'274 as previously noted.

Objections to the Drawings

The replacement sheets of drawings correct the overlapping lead line in Figure 5.a and correct the reference number --412-- in Figure 4.c.

In Figure 7.b, "76" and its lead line are revised for improved visibility.

Concerning the objection regarding "735" in Figures 7.a and 7.c, the specification is revised at page 27 to identify elements 735 as --locking cavities--. Accordingly, the drawings are not changed in that regard.

The specification is revised at page 20 to mention "251" and at page 24 to mention "4".

Figure 1 is revised to illustrate the upper and lower winding angles mentioned on page 18, line 2.

The corrected drawing sheets and above-discussed revisions to the specification are submitted as responsive to the drawing objections.

Specification

A revised Abstract is submitted on a separate sheet. That revised Abstract complies with the objections noted in paragraph 9 of the Office action.

The specification is revised in compliance with the objections noted in paragraph 10 of the Office action. However, at page 23, line 2, "of" is replaced by --or-- instead of "and" as the Examiner suggested.

Claim Objections

The revisions to the objected-to claims are submitted to overcome the noted objections.

Claim Rejections-35 U.S.C. § 112

Claim 9 is revised to provide antecedent basis for "the supporting surface" in line 1 of that claim.

The claims containing both a broad range and a narrow range, including phrases like "such as", "preferably", or "optionally", are revised to remove the wording that might narrow the broad language of those claims. The claims as revised are submitted as complying with 35 U.S.C. § 112, second paragraph.

Claim Rejections-35 U.S.C. §§ 102/103

Claims 1-7, 11, 13, 16, 18-19, 22, 24-31, 34, and 36 were rejected as anticipated by *Glejbol* (WO 01/07818). According to the rejections as applied to Claim 3, now

incorporated in amended Claim 1, the rejection asserts that *Glejbol* discloses a straight-line-section that is substantially unsupported between the wire-pipe-exit-point and the straight-line-end-point on the support unit of the pipe structure. The Applicant respectfully traverses this rejection including the features of formal Claim 3 as included in amended Claim 1.

Fig. 2 of *Glejbol* shows wire sections extending in opposite directions from a wire-pipe-exit-point. However, Fig. 2 does not show that the armouring wire section separates tangentially away from the underlying pipe layer. Furthermore, nothing in *Glejbol* says that the armouring wire separates away from the underlying pipe layer or relates to in which direction and which angle the armouring wire section might separate from the underlying pipe.

Furthermore, it is clear that the wire sections 5, 7, and 8 in *Glejbol* are embedded in a curing mass applied in the space 14 (Fig. 2). In other words, the straight-line-section between the wire-pipe-exit-point and the straight-line-end-point is *fixed* by the curing mass and, therefore, is supported instead of being separated from the underlying pipe. Please also see page 10, lines 16-18 of *Glejbol*, stating that the space 14 accommodates a curing mass, such as an epoxy resin, which surrounds the reinforcement wires 7 and 8.

It is thus clear that the armouring wires in *Glejbol* do not separate tangentially away from the underlying pipe layer. Moreover, the straight-line-section is clearly supported in *Glejbol* instead of "essentially unsupported" as specified in amended Claim 1, because the wire sections of *Glejbol* are fixed in an epoxy resin. (Please refer to page 5, lines 21-25 of the present specification for the meaning of the Applicant's term "essentially unsupported" in the context of this application.)

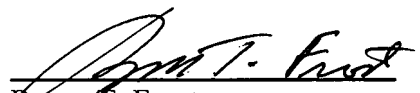
Accordingly, the Applicant respectfully submits that *Glejbol* does not anticipate a pipe structure as embodied in amended Claim 1. For that reason, the anticipation rejection of that claim and the claims depending therefrom should be withdrawn.

Claim 17, 20-21, 23, and 35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Glejbol*. This rejection is considered moot as those claims all depend from Claim 1, which now incorporates the elements formerly in Claim 3.

The foregoing is submitted as a complete response to the Office action identified above. The Applicant submits that the present application is in condition for allowance and respectfully requests a notice to that effect.

Respectfully submitted,

MERCHANT & GOULD



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PATENT TRADEMARK OFFICE

Substitute Abstract

A pipe structure comprising a length of a flexible pipe connected to an end fitting, the flexible pipe comprising an armour layer and an underlying pipe layer the armour layer, the underlying pipe layer having an outer surface around which armouring wires of an armouring layer are helically wound. The pipe structure provides a coupling between a flexible pipe comprising armouring wires and an end fitting, the coupling exerting a relatively low bending or flexure strain on the wires during normal operation of the flexible pipe. The transition path of an armouring wire between the flexible pipe and the end fitting comprises a straight-line-section between a wire-pipe-exit-point where the wire extends away from its underlying pipe layer and a straight-line-end-point on a support unit of the end fitting where the armouring wire in question has its first tangential point of contact. This has the advantage that in a loaded situation where the armouring wires will elongate elastically leading to a change in the helical angle of the armouring wires, the pipe structure will experience a slight twist and a controlled bending of the armouring wires on the surface of the support unit (due to a possible change in the base point of contact of the armouring wire with the support unit induced by the change of helical angle), thereby avoiding substantial bending of the individual armouring wires, which is of particular importance when the armouring wires are formed of a composite material. The pipe structure may be used in flexible pipes for the off shore transport of fluids (e.g. oil).